What is claimed is:

1. A recombinant MSP-1_{42} protein which retains its native folding.

2. A composition comprising the recombinant *P. falciparum* MSP-1_{42} of claim 1.

3. A recombinant vector comprising a DNA sequence encoding MSP-1_{42}.

4. The vector of claim 3 wherein said DNA sequence is from *Plasmodium falciparum* 3D7.

5. The vector of claim 4 wherein said DNA sequence corresponds to SEQ ID NO:2.

6. The vector of claim 5 wherein said vector is pETATpfMSP-1_{42}.

7. A host cell transformed with the vector according to claim 6.

8. The host cell of claim 7 wherein said host is E. coli BL21 (DE3).

9. A method for producing and purifying recombinant *P. falciparum* MSP-1_{42} protein comprising:

growing a host cell containing a vector expressing *P. falciparum* MSP-1_{42} proteins in a suitable culture medium,

causing expression of said vector under suitable conditions for production of soluble MSP-1_{42} protein and,

lysing said host cells and recovering said MSP-1_{42} protein such that it retains its native folding.

10. The method of claim 9 wherein said expression of said vector is by induction with IPTG at a temperature range of 24°C-27°C.

11. The method of claim 10 wherein said induction is at 25°C.

12. The method of claim 9 wherein lysing of cells is in the presence of imidazole.

13. The method of claim 9 further comprising removal of *E. coli* endotoxin.

14. The method of claim 13 wherein said removal of endotoxin is by application to a Ni-NTA column.

15. An antibody produced against the recombinant MSP-1_{42} protein of claim 1.

16. The antibody of claim 15 wherein said antibody is monoclonal or polyclonal.

17. A method for *in vitro* diagnosis or detection of malaria antigen present in a biological sample, comprising:

(i) contacting said biological sample with a MSP-1_{42} specific antibody, preferably in an immobilized form under appropriate conditions which allow the formation of an immune complex,

(ii) removing unbound components,

(iii) incubating the immune complexes formed with heterologous antibodies which specifically bind to the

antibodies present in the sample to be analyzed, with said heterologous antibodies conjugated to a detectable label under appropriate conditions,

(iv) detecting the presence of said immune complexes visually or mechanically.

18. A kit for *in vitro* detection of a malaria antigen present in a biological sample, comprising:

at least one antibody which react with recombinant MSP-1_{42}, with said antibody being preferentially immobilized on a solid substrate,

a buffer, or components necessary for producing the buffer, enabling binding reaction between these antibodies and the malaria antigens present in the biological sample, and

a means for detecting the immune complexes formed in the preceding binding reaction.

19. A recombinant protein according to any one of claims 1 or 2, wherein said purified protein is at least 95% pure.

20. A recombinant protein according to any one of claims 1 or 2, wherein said purified protein is at least 90% pure.

21. A recombinant protein according to claim 1 wherein said purified protein is at least 97% pure.

22. A recombinant protein according to claim 1 wherein said purified protein is at least 98% pure.

23. A recombinant protein according to claim 1 wherein said purified protein is at least 99% pure.

24. A recombinant MSP-1_{42} protein according to claim 1 which is at least 80% pure.

25. A recombinant MSP-1_{42} protein according to claim 1 which is at least 90% pure.

26. A recombinant MSP-1_{42} protein according to claim 1 which is at least 95% pure.

27. A recombinant MSP-1_{42} protein according to claim 1 which is at least 97% pure.

28. A recombinant MSP-1_{42} protein according to claim 1 which is at least 98% pure.

29. A recombinant MSP-1_{42} protein according to claim 1 which is at least 99% pure.

30. An immunogenic carrier comprising a protein according to claim 1.

31. A method for *in vitro* diagnosis of malaria antibodies in a biological sample, comprising

(i) contacting said biological sample with a composition comprising a MSP-1_{42} peptide according to claim 1 under appropriate conditions which allow the formation of an immune complex, wherein said peptide is labeled with a detectable label, and

(ii) detecting the presence of said immune complexes visually or mechanically.

32. A kit for determining the presence of malaria antibodies in a biological sample, comprising:

at least one peptide or protein composition according to claim 1,

a buffer or components necessary for producing a buffer;

means for detecting immune complexes formed betweem the peptide and antibodies present in the sample.

33. A method for *in vitro* monitoring malaria infection or prognosing the response to treatment of patients suffering from malaria infection comprising:

incubating a biological sample from a patient with malaria infection with an MSP-1_{42} protein according to claim 1 or a suitable part thereof under conditions allowing the formation of an immunological complex,

removing unbound components,

calculating the anti-MSP-1_{42} titers present in said sample

and monitoring the natural course of malaria infection, or prognosing the response to treatment of said patient on the basis of the amount anti-MSP-1_{42} titers found in said sample at the start of treatment and/or during the course of treatment.

34. A kit for monitoring malaria infection or prognosing the response to treatment of patients suffering from malaria infection
comprising:

at least one MSP-1_{42} peptide according to claim 1,

a buffer or buffer components

means for detecting the immune complexes formed between the peptide and antibodies present in the sample, and

optionally, a means for determining the amount of immune complex formed.

35. A vaccine against malaria comprising *P. falciparum* MSP-1_{42}.

36. The vaccine of claim 35 wherein said *P. falciparum* is 3D7.

37. The vaccine of claim 35 further comprising an adjuvant.

38. The vaccine of claim 37 wherein said adjuvant is chosen from the group consisting of: montanide and alum.

39. A method for inducing in a subject an immune response against malaria infection comprising administering to said subject a composition comprising an immunologically effective amount of *P. falciparum* MSP-1_{42} in an acceptable diluent.

40. The method of claim 39 wherein said composition further comprises an adjuvant.

41. The composition of claim 40 wherein said adjuvant is selected from the group consisting of montanide and alum.

42. The composition of claim 41 wherein said adjuvant is montanide.

43. A method for inducing a protective immune response to malaria in a mammal, comprising

administering a composition comprising a *P. falciparum* MSP-1_{42} in an amount effective to induce an immune response in said mammal.

44. The method according to claim 43 wherein the composition further comprises an adjuvant selected from the group consisting of montanide and alum.

45. The method according to claim 43 wherein said *P. falciparum* is 3D7.

46. A multivalent vaccine for protection against infection with more than one strain of *P. falciparum* comprising MSP-1_{42}, said *P. falciparum* selected from the group consisting of 3D7, FVO and CAMP.

47. The multivalent vaccine of claim 46, further comprising an adjuvant selected from the group consisting of montanide and alum.